REMARKS/ARGUMENTS

Claim Status – Request for Reconsideration

Reconsideration of this application is requested. The claims presented for reconsideration are claims 16, 17, 19-22, 24-26, and 28-30.

The claims have been amended to more accurately define a preferred embodiment of the invention, as well as to correct antecedent bases of various terms. Accordingly, no new matter has been entered.

Information Disclosure Statement

It has been indicated in the office action that the previously presented Information Disclosure Statement has been entered into the file, but not considered. So that the references in that Statement will be fully considered, applicant will shortly submit a new Statement.

Specification

Terms such as phosphorous, neutralised, and pK have been objected to. Applicant points out, however, that terms such as phosphorous and neutralised are commonly used in the UK and that the use of such terms would be understood by those of ordinary skill in the art who are English readers. With regard to the term pK, this is understood by those of skill in the art to refer to $-\log_{10}$ of K, the dissociation constant. Accordingly, the terms used in the specification would be understood by those of ordinary skill in the art.

Claim Objections

Terms such as phosphorous and effected have been objected to. The term phosphorous would be understood by those of ordinary skill in the art to mean of, or relating to, or containing phosphorus. Accordingly, no correction is necessary. The word "effected" has been removed. Accordingly, the objection to the claim language has been overcome.

Claim Rejections – 35 U.S.C § 112

The claims have been rejected under 35 U.S.C § 112, first and second paragraphs, for the definition of the term pH. That phrase having been removed, the rejections have been overcome.

Claim Rejections – 35 U.S.C § 102

Claims 16-19, 22-24 and 29 were rejected under 35 U.S.C § 102(b) as being anticipated by McArthur (US Patent No. 4,039,471). This rejection is traversed and reconsideration requested.

This invention is directed to a method for the regenerating denox catalyst having reduced activity based on the accumulation of phosphorous and phosphorous compounds. The method includes treating the catalyst in the presence of a substantially aqueous solution of water-soluble, alkalinely reacting alkaline earth salts, ammonium hydroxide or alkalinely reacting ammonium salts or water-soluble organic amines with an ultrasonic treatment or low-frequency oscillations. The treated catalyst is then neutralized by a subsequent treatment with inorganic or organic acids to regenerate the denox catalyst.

McArthur is directed to a method for rejuvenating an automobile emission control catalyst poisoned with lead or phosphorus. The method is performed by initially extracting some of the poison compounds from the catalyst with a select aqueous ammonium or acetate salt (preferably ammonium acetate) solution. The catalyst is exposed to a reducing atmosphere at 300° to 700°C, and the poison compounds removed by a second extraction with a select aqueous ammonium or acetate salt solution

McArthur differs from the claimed invention in that McArthur does not treat the catalyst in the presence of a substantially aqueous solution of water-soluble, alkalinely reacting alkaline earth salts, ammonium hydroxide or alkalinely reacting ammonium salts or water-soluble organic amines with an ultrasonic treatment or low-frequency oscillations. Although McArthur does indicate that a recycle pump can be used to move the treating fluid, this is not the same as or similar to treating an ultrasonic treatment or low-frequency oscillations. Applicant has found that such treatment is particularly effective in removing catalyst coated with emission deposits having a high level of phosphorus. Accordingly, McArthur does not disclose or suggest the claimed invention, and removal of the rejection is requested.

Claim Rejections – 35 U.S.C § 103

Claims 20 and 21 have been rejected under 35 U.S.C § 103(a) as being unpatentable over McArthur in view of Mross (US Patent No. 4,529,714). This rejection is traversed and reconsideration requested.

Claims 20 and 21 concern the additional use of surfactants during treating. McArthur does not disclose the use of surfactants, and it has been alleged in the office action that the additional teaching of Mross would have made the use of surfactants obvious.

Applicant notes that Mross is directed to a process for regenerating silver-containing carrier catalysts used in the preparation of ethylene oxide. This process has nothing to do with regenerating denox catalysts, which is the focus of both the claimed invention and McArthur. To combine completely dissimilar processes would not be something that anyone of ordinary skill in the chemical arts would do. There is no expectation that steps of dissimilar processes would have any functioning value. In fact, there would likely be a reasonable concern that combining two completely dissimilar chemistries could generate an adverse response. Accordingly, the combination of McArthur and Mross cannot be properly considered to suggest applicant's claimed invention.

Claims 25-28 have been rejected under 35 U.S.C § 103(a) as being unpatentable over McArthur in view of Budin (US Patent No. 6,484,733). This rejection is traversed and reconsideration requested.

Applicant points out that this invention includes a step of treating the catalyst in the presence of a substantially aqueous solution of water-soluble, alkalinely reacting alkaline earth salts, ammonium hydroxide or alkalinely reacting ammonium salts or water-soluble organic amines with an ultrasonic treatment or low-frequency oscillations. As noted above, McArthur does not disclose or suggest such a step.

Although Budin is also concerned with regenerating a denox catalyst, Budin indicates that a subsequent step of washing with water can be performed using ultrasonic irradiation. See column 4, lines 14-27. Thus, Budin does not disclose using ultrasonic treatment during an alkaline treatment step. Budin only suggests performing ultrasonic treatment during washing. Budin, therefore, fails to recognize the ability to effectively treat and remove phosphorus material from a phosphor-laden catalyst as in the invention claimed by applicant. Accordingly, the combination of McArthur and Budin fails to suggest the claimed invention, and applicant requests removal of the rejection.

Claim 30 has been rejected under 35 U.S.C § 103(a) as being unpatentable over McArthur in view of Nojima (US Patent No. 6,395,665). This rejection is traversed and

reconsideration requested.

As noted above, McArthur differs from the claimed invention in that McArthur does not treat the catalyst in the presence of a substantially aqueous solution of water-soluble, alkalinely reacting alkaline earth salts, ammonium hydroxide or alkalinely reacting ammonium salts or water-soluble organic amines with an ultrasonic treatment or low-frequency oscillations. Nojima also does not disclose such a step, nor does Nojima suggest using ultrasonic treatment or low frequency oscillation while treating catalyst in the presence of a substantially aqueous solution of water-soluble, alkalinely reacting alkaline earth salts, ammonium hydroxide or alkalinely reacting ammonium salts or water-soluble organic amines. Accordingly, the combination of McArthur and Nojima fails to suggest the claimed invention, and applicant requests removal of the rejection.

CONCLUSION

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated, since this should expedite the prosecution of the application for all concerned.

The Commissioner is further authorized to charge any deficiency in fees or credit any overpayments to Deposit Account No. 09-0528 (Docket # C293 1030US).

Respectfully submitted,

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